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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,672	09/19/2001	Kevin M. Moore	ADM-0003-00	1250

7590 10/03/2003

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EXAMINER

OH, TAYLOR V

ART UNIT	PAPER NUMBER
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1625

DATE MAILED: 10/03/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary

Application No.

09/955,672

Applicant(s)

MOORE ET AL.

Examiner

Taylor Victor Oh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-13 and 16-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-13, and 16-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Final Rejection

The Status of Claims

Claims 1, 4-13, 16-62 are pending.

Claims 1, 4-13, 16-62 have been rejected.

Specification

The objection of the disclosure has been withdrawn due to the correction made in the specification.

Claim Objections

The objection of claims 4, 5, and 17 has been withdrawn due to the modification made in the claims. However, claims 16 and 18 are objected since they are not dependent upon the precedent claims.

Claim Rejections-35 USC 112

The rejection of claims 4, 6, 13, 14, 16, 18, and 33 under 35 USC 112, first paragraph, has been withdrawn due to applicants' convincing argument in the amendment. Also, the rejection of claims 1, 13, and 33 under 35 USC 112, second paragraph, has been withdrawn due to the modification made in the claims.

Claim Rejections-35 USC 102

The rejection of claims 1-3 and 10 under 35 U.S.C. 102(b) as being anticipated clearly by Hartmann (U.S. 3,454,603) has been withdrawn due to the modification made in the amendment.

Claim Rejections-35 USC 103

1. Applicants' argument filed 7/07/2003 have been fully considered but they are not persuasive.

2. Rejection of Claims 1, 4-13, 16-62 under 35 U.S.C. 103(a) as being unpatentable over Hartmann (U.S. 3,454,603) in view of Feldmann et al (U.S. 4,564,692) and Brinegar et al (WO 00/14081).

The rejection of claims 1, 4-13, 16-62 under 35 U.S.C. 103(a) as being unpatentable over Hartmann (U.S. 3,454,603) in view of Feldmann et al (U.S. 4,564,692) and Brinegar et al (WO 00/14081) is maintained with the reasons of the record in paper no. 4.

In Response to the Argument

3. The applicants argue the following issues:

1. there is no motivation to combine the prior art references ;

2. the Brinegar et al does not suggest the desirability of a process for producing anhydrosugar alcohols without using organic solvents;

3. the Feldmann et al is directed to a supersaturation-based method that uses seed crystals unlike the present invention.

The applicants' argument have been noted, but these arguments are not persuasive.

First, with regard to the first argument, the Examiner has noted applicants' argument. However, there is a motivation to combine all the prior art. Hartmann does disclose the process of preparing 1,4-3,6-dianhydroglucitol by heating hexitols in the presence of sulfuric acid at a temperature of from 110 to 185° C., and then distilling the reaction mixture to recover dianhydrohexitols at low pressures, furthermore, the products may be purified by recrystallization. Also, Feldmann et al expressly teaches the process of purifying the anhydro sugar alcohols obtained from acid-catalyzed dehydration of hexitols by crystallization from a concentrated solution in the absence of organic crystallization solvents; moreover, when sugar alcohols are dehydrated, the reaction mixtures contain various impurities detrimental to the production of polyesters (see col. 1, lines 23-30). Therefore, it would have been obvious to the skilled artisan in the art to have motivated to incorporate the Feldmann et al crystallization technique into Hartmann in order to further purify the desired product suitable for producing polyesters. This is because the skilled artisan in the art would expect to improve on the purity of the desired compound by applying the Feldmann et al crystallization technique to the Hartmann process.

Second, regarding the second argument, the Examiner has noted applicants' argument. However, the Brinegar et al has been used as the tertiary reference to supplement the primary reference regarding the teaching of AG50W-X12 acidic catalyst useful for producing anhydro sugar alcohols with no residue, whereas the secondary Feldmann et al expressly teaches the process of purifying the anhydro sugar alcohols obtained from acid-catalyzed dehydration of

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hexitols in the absence of organic crystallization solvents. Therefore, the Brinegar et al is still relevant to the claimed invention.

Third, concerning the third argument, the Examiner has noted applicants' argument. However, the Feldmann et al also teaches a process of obtaining pure anhydrosugar alcohols from the reaction mixtures that have been purified by means of ion exchanges. Therefore, the Feldmann et al is relevant to the claimed invention.

Therefore, the Examiner maintains the rejection of all the claims

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Victor Oh whose telephone number is (703) 305-0809. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman, can be reached on (703) 308-4698. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

T. Victor Oh

Victor Oh
9/30/03

Alan L. Rotman
ALAN L. ROTMAN
SUPERVISORY PATENT EXAMINER
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